# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/577,418 | 04/27/2006 | Takuji Maeda | P29854 | 3319 |

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GREENBLUM & BERNSTEIN, P.L.C.
1950 ROLAND CLARKE PLACE
RESTON, VA 20191

| EXAMINER |
|---|
| ALSIP, MICHAEL |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2186 | |

| NOTIFICATION DATE | DELIVERY MODE |
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| 01/14/2010 | ELECTRONIC |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com
pto@gbpatent.com

PTOL-90A (Rev. 04/07)

<table>
<tr><td rowspan="3"><strong>Office Action Summary</strong></td><td><strong>Application No.</strong><br>10/577,418</td><td><strong>Applicant(s)</strong><br>MAEDA ET AL.</td></tr>
<tr><td><strong>Examiner</strong></td><td><strong>Art Unit</strong></td><td></td></tr>
<tr><td>MICHAEL ALSIP</td><td>2186</td><td></td></tr>
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*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)☒ Responsive to communication(s) filed on <u>12 November 2009</u>.

2a)☐ This action is **FINAL**.          2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)☒ Claim(s) <u>24,25,27-41 and 43-46</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>24,25,27-41 and 43-46</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

## Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All    b)☐ Some *   c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

U.S. Patent and Trademark Office
PTOL-326 (Rev. 08-06)           Office Action Summary           Part of Paper No./Mail Date 20100107

# DETAILED ACTION

## *Specification*

1.　　The lengthy specification has not been checked to the extent necessary to

determine the presence of all possible minor errors.　Applicant's cooperation is

requested in correcting any errors of which applicant may become aware in the

specification.

## *Claim Rejections - 35 USC § 102*

1.　　The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2.　　**Claims 24-25, 27-41 and 43-46** are rejected under 35 U.S.C. 102(b) as being

anticipated by Ouchi et al. (JP 2000181784), the English translation will be referenced

and provided in with this action.

3.　　Consider **claim 24**, Ouchi et al. discloses an information recording medium for

storing data managed by a file system, to/from which data is written/read via a

command received from outside, the information recording medium comprising (¶'s

[0024], [0033] and [0039]): a receiving section operable to receive a command and data

from outside ([0024], [0033] and [0039], where the flash memory card receives

commands and data from outside); a first recording area in which data writing is

managed in a first access unit; a second recording area in which data writing is

managed in a second access unit larger than the first access unit (¶'s [0018]-[0020] and [0044], where the buffer 19 and memory chip 13 are the first recording area and the buffer 19 and memory chip 14 are the second recording area); and a controller operable to control access to the first or second recording area according to the received command; wherein when receiving a write command (¶'s [0028], [0035] and [0038]), the controller controls the access so as to select the first or second recording area depending on a data type of the received data and to write the received data to the selected area (¶'s [0038-[0040] and [0051]-[0053]), and **wherein the data type includes a type indicating entity data, and a type indicating file system management information** (¶'s [0009], [0012], [0028], [0082] and [0088]).

4.      Consider **claim 25**, as applied to **claim 24** above, Ouchi et al. discloses wherein the first recording area stores file system management information necessary for managing the file in the file system, and the second recording area stores entity data of the file managed by the file system (¶'s [0012] and [0086]-[0088]).

5.      Consider **claim 27**, as applied to **claim 24** above, Ouchi et al. discloses further comprising an area for storing the address management information for managing correspondence of physical address and logical address of the first and second storage areas (¶'s [0009]-[0012], [0042] and [0048]).

6.      Consider **claim 28**, as applied to **claim 27** above, Ouchi et al. discloses wherein the address management information includes information about write position of data (¶'s [0009]-[0012], [0042] and [0048]).

7.      Consider **claim 29**, as applied to **claim 24** above, Ouchi et al. discloses wherein
the data type is specified by an argument of the command, and the controller judges the
data type on the basis of the value of the argument (¶'s [0025], [0028]-[0029] and
[0090]-[0099]).

8.      Consider **claim 30**, as applied to **claim 24** above, Ouchi et al. discloses wherein
the first recording area and second recording area are provide on mutually different
storage devices (¶ [0029], [0042] and [0107]).

9.      Consider **claim 31**, as applied to **claim 30** above, Ouchi et al. discloses wherein
the different storage devices have different characteristics of rewrite life (¶'s [0007],
[0013]-[0015] and [0107]).

10.     Consider **claim 32**, as applied to **claim 24** above, Ouchi et al. discloses wherein
the controller judges the data type on the basis of a write position of the data (¶'s
[0044], [0051]-[0060]).

11.     Consider **claim 33**, as applied to **claim 32** above, Ouchi et al. discloses wherein
the receiving section receives from outside information about position or size of the file
system management information which is necessary for managing the file in the file
system, the information recording medium further includes a FS management
information register operable to hold the information about position or size of the
received file system management information, and the controller judges the data type
on the basis of the value of the FS management information register when receiving the
write command (¶'s [0025], [0028]-[0029], [0038] and [0090]-[0099]).

12.     Consider **claim 34**, as applied to **claim 33** above, Ouchi et al. discloses the information recording medium according to claim 33, which, when receiving the information about position of **the** file system management information, judges whether the received position of the file system management information is included in the second recording area, and if included, moves data of predetermined size including the received position from the second recording area to the first recording area (¶'s [0015], [0055]-[0063], where if data is to be written to a sector in memory chip 14 of the second storage area, data present in the cluster is moved to the buffer (which is part of both the first and second storage area), old data eliminated and all the data is moved back to the memory chip 14).

13.     Consider **claim 35**, as applied to **claim 34** above, Ouchi et al. discloses wherein, when the first and second recording areas are provided on nonvolatile storage devices having predetermined data erase units, the predetermined size is same as the size of the larger data erase unit (¶'s [0015], [0055]-[0063], where the size of the data evacuated to the buffer is the same size of the cluster stored on memory chip 14).

14.     Consider **claim 36**, as applied to **claim 33** above, Ouchi et al. discloses wherein when receiving a write command, the controller judges the data type by comparing the value of FS management register with the write address specified by the write command (¶'s [0057]-[0060]).

15.     Consider **claim 37**, as applied to **claim 24** above, Ouchi et al. discloses wherein the first and second storage areas are provided on the same storage device (¶ [0029], [0042] and [0107]).

16.    Consider **claim 38**, as applied to **claim 24** above, Ouchi et al. discloses

comprising: a slot for loading the information recording medium; an access control

section operable to control writing and reading of data in the information recording

medium loaded in the slot; and a file system control section operable to control the file

system established on the information recording medium loaded in the slot, and transmit

data and information about the data type to the information recording medium, when

writing to the information recording medium (¶'s [0033], [0038]-[0041] and [0106]-

[0107]).

17.    Consider **claim 39**, as applied to **claim 38** above, Ouchi et al. discloses wherein

the file system control section specifies, as the data type, a type indicating data entity or

file system management information ([0009], [0012], [0082] and [0088]).

18.    Consider **claim 40**, as applied to **claim 33** above, Ouchi et al. discloses

comprising: a FS management information notice section operable to inform the

information recording medium of information about position and size of file system

management information, wherein the FS management information notice section

informs the information recording medium of information about position and size of file

system management information, prior to writing of the file system management

information (¶'s [0025], [0028]-[0029] and [0090]-[0099]).

19.    Consider **claim 41**, Ouchi et al. discloses a control method of information

recording medium, for managing data stored in the information recording medium with a

file system, comprising: managing writing of data to a first recording area in a first

access unit; managing writing of data to a second recording area in a second access

unit larger than the first access unit; receiving data and a write position together with a write command; selecting either one of the first and second recording areas as data writing area depending on data type of the received data; and writing the received data to the selected area (¶'s [0018]-[0020] and [0090]-[0099]), and **wherein the data type used in selecting the first or second recording areas include a type indicating entity data, and a type indicating file system management information** (¶'s [0009], [0012], [0028], [0082] and [0088]).

20.    Consider **claim 43**, as applied to **claim 41** above, Ouchi et al. discloses wherein further comprising receiving information about data type together with a write command, and judging the data type on the basis of the received information about data type (¶'s [0025], [0028]-[0029] and [0090]-[0099]).

21.    Consider **claim 44**, as applied to **claim 41** above, Ouchi et al. discloses wherein the data type is judged on the basis of the write position of the data(¶'s [0044], [0051]-[0060]).

22.    Consider **claim 45**, as applied to **claim 24** above, Ouchi et al. discloses comprising transmitting information about data type of writing data to the information recording medium together with a write command (¶'s [0038]-[0040] and [0051]-[0053]).

23.    Consider **claim 46**, as applied to **claim 33** above, Ouchi et al. discloses comprising: transmitting information about position and size of file system management information to the information recording medium to set an area for storing the file system management information in the information recording medium; and transmitting

a write command together with data and write address to the information recording medium to write the data (¶'s [0025], [0028]-[0029], [0038] and [0090]-[0099]).

### *Response to Arguments*

24.    Applicant's arguments filed 11/12/2009 have been fully considered but they are not persuasive.

25.    The Applicant argues, with respect to **claims 24 and 41,** which now incorporate the claim limitations of dependent **claims 26 and 42**, that Ouchi does not disclose that data is written to an area depending on the type of data, but rather on the size of the data, the Examiner will repeat the arguments section of the previous office action because they still apply and also further explain the Examiners reasoning. Ouchi discloses in ¶ [0009] that the memory is divided into four areas: a boot sector, FAT area, root directory field and data area, indicating that specific data is stored in specific areas, based on its type. ¶ [0042] discloses that each memory chip has a management area and a data area, indicating that specific data in each memory chip is stored in specific areas, based on its type and in ¶'s [0082]-[0083], Ouchi discloses that certain types of data are assigned or restricted to certain memory block sizes and therefore the writing of data is dependent on both size and type. The Applicant further argues that there is no absolute correspondence between size of data/number of sector regions and data types particularly indicative of entity data or file system management information. However, Ouchi (¶'s 9-12, 17, 42, 51-53, 82-83) discloses that the purpose of the invention is to prevent the life of the whole flash memory chip from becoming short by degradation of specific memory blocks, when the data rewrite of a specific size happens

frequently, Ouchi also discloses, as stated above, that the memory is divided into four

regions and that each memory chip has a management area and data area. The data

stored in these areas are assigned or restricted to certain sizes for a period of time

depending on the rewrite frequency of that data at that particular size to reduce the

chances of the life of the whole flash memory chip from becoming short by degradation

of specific memory blocks. Therefore even though the size of the data is a factor in

determining where the data will be stored, the size is directly correlated to the type of

data being stored and data is stored in regions depending on its type such as the boot

sector, FAT area, root directory field and data area, therefore the claim language is

considered to be met by the Ouchi reference.

## *Conclusion*

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to MICHAEL ALSIP whose telephone number is (571)270-

1182. The examiner can normally be reached on Monday through Friday 7:30AM to

5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Matt Kim can be reached on 571-272-4182. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matt  Kim/                                                  Michael Alsip
Supervisory Patent Examiner, Art Unit 2186                   Examiner
                                                             Art Unit 2186

/Michael Alsip/
Examiner, Art Unit 2186

January 7, 2010